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ABSTRACT

The two studies reported, on teacher reinforcement of and teacher attitudes toward children's sex-preferred behaviors attempted to clarify some issues concerning the differential treatment of boys and girls at the preschool level. The first study looked at teacher reinforcement of sex-preferred behaviors in children aged 3 to 5 years as a function of the experience of the teacher. Six children of each sex in each of four independent play groups were observed with their teachers; a coded observation schedule was used to compare the patterns of teacher reinforcement for sex-preferred behaviors and the amounts of teacher response for boys and girls and for experienced and inexperienced teachers. Results indicated that all teachers responded in equal amounts to boys and girls and reinforce feminine preferred behaviors not only in girls but also in boys. The second study compared sex stereotyping and educational attitudes of college students of both sexes who were either experienced or inexperienced in dealing with young children. Subjects were asked to rate 31 child behaviors either on sex appropriateness or on importance for future academic performance. Results showed that 12 behaviors were considered sex stereotyped, six male and six female, and that inexperienced persons rated behaviors as stereotyped significantly more frequently than experienced persons. The two studies indicated teacher experience rather than sex of teacher to be a determinant of teacher classroom behavior and brought into question the differential effects on boys and girls of being reinforced for behaviors which are preferred by girls and nonpreferred by boys. (GO)

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Teacher Reinforcement of Feminine-Preferred Behavior Revisited

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Recent studies have shown that boys and girls do not necessarily have similar experiences in the same classroom (Fagot, 1973; Fagot & Patterson, 1969; Serbin, et al., 1973). Because boys experience more difficulty in school and, in particular, experience more difficulty in obtaining reading skills, much of the work has been directed to finding incidences of negative or inferior treatment on the part of female teachers (Dwyer, 1973). The results of the studies are somewhat confusing and sometimes seem to be as much influenced by the method of data collecting as anything else. McNeil (1964) relied on children rating how the teachers treated boys and girls and came to the conclusion that boys were being discriminated against in first grade classrooms. Davis and Slobodian (1967) also had children rate how the teachers treated the two sexes and replicated the McNeil results, but found that on observing the teachers in the classroom there was no differential treatment of boys and girls that was not dependent upon the occurrences of particular behaviors. What they did find is that boys interrupted the learning process more often and consequently did receive more negative comments; but it was the behavior itself, not the sex of the child, which determined the type of interaction. Serbin, et al. (1973), observing a number of preschool classrooms, found a slightly different result. They found that boys received more instructional and nurturant attention when participating appropriately in class activities. Boys were given more reprimands for aggressive behaviors even when the differential base rate of such behaviors by boys and girls was taken into account. Girls were given increased attention when they stayed close to the teacher, while boys were not. Serbin's study does not suggest that boys are being discriminated against in the classroom. In fact, if anything it suggests that boys receive more feedback, both positive and negative, for

their behavior; but it does again confirm that boys and girls receive different treatment within the classroom. Fagot (1973), using still a different observation scale, found in one study that teachers answered more questions from girls (it was not possible to analyze from the data whether girls asked more questions, but this is probable for there was no sex difference in teachers ignoring a child) and teachers gave more favorable comments to girls. In a second study, the trend was in the same direction, but the differences did not reach significance. Again, the Fagot study doesn't suggest that boys receive more negative treatment in the classroom, but it does suggest that boys are often engaged in activities which do not lend themselves to teacher interaction and consequently boys are receiving less attention. Biber, et al. (1972), also found that girls received more instructional contacts than boys, and because positive reinforcement was highly correlated with instructional comment, girls received more positive comments; but when boys participated in instructional activities positive comment was equal.

A slightly different approach to the study of teacher-child interaction has led to some concern over just what it is that female teachers do respond to. Given that boys and girls are not receiving drastically different rates of response, there is still a problem of what kinds of behaviors are being responded to. Fagot and Patterson (1969) hypothesized that teachers would respond to behaviors which were, or had been, part of their own behavior repertoire. Consequently, as more preschool and early grade school teachers are feminine, they would respond to feminine-preferred behaviors. Fagot and Patterson did find that when you took only sex-typed behaviors and looked at teacher responses, then teachers were reinforcing both sexes for feminine behaviors 83% of the time. They found no difference in total amount of reinforcement received by the two sexes, but it was apparent that boys were being reinforced for behaviors which were non-preferred by them, while girls received reinforcement for their preferred behaviors.

Fagot (1975), in a study in Dutch preschools using the Fagot-Patterson Observation Schedule, found that Dutch preschool teachers reinforced each sex for sex-appropriate behaviors so that both sexes were receiving reinforcement for their preferred activities. This suggests that the original hypothesis that teachers would respond to behaviors which are or have been part of their own repertoire

is not an adequate explanation. Further evidence of this comes from two studies using the Fagot-Patterson checklist with male and female teachers. McCandless (1973) found that female teachers reinforced both sexes for feminine-preferred behaviors 81% of the time, while male teachers reinforced feminine-preferred behaviors 51% of the time and masculine behaviors 49% of the time. Etaugh, et al. (1975), in a study with four female and one male teacher, found that the male tended to give as many reinforcers for feminine behaviors as the female teachers, but he did give almost twice as many reinforcers for the masculine-preferred behaviors than did the female teachers.

Two studies are reported in this paper. The first looks at teacher reinforcement of sex-preferred behaviors as a function of the experience of the teacher. One difference between the male and female teachers in McCandless' study was that the female teachers were experienced teachers, while the males were high school students trained as care-givers for the study. It is possible that teaching experience was the pertinent variable and not sex of the teacher. The second study is to compare sex-stereotyping and educational attitudes of males and females, some of whom have had previous experience with three year old children and some of whom are inexperienced.

Study 1

Subjects

The teachers in this study were participants in special summer play programs for three to five year old children. The teachers were all female. Four of the teachers were experienced and were hired on the basis of at least three years prior teaching experience with young children. These teachers were in their early twenties. Four of the teachers were inexperienced and were hired as aides for the program. They were in their late teens and had no prior teaching experience, although most had done considerable babysitting.

The children in the play groups were three to five years old, came from varied socioeconomic backgrounds, with a wide range of preschool experiences. The groups were informal, with children dropping in and out throughout the day. However, there were never more than 20 children with the two teachers at any one time; although

often on the playground older children would be using the equipment, so interactive play was not always with children in the preschool play group. The groups were approximately equally divided between the sexes.

Observation Schedule

The Fagot-Patterson Observation Schedule was used to observe the children and teachers in this study. Minor modifications were made in the checklist. Sandbox play was split into two categories, outdoor and indoor, and two categories were added, jump rope and vergal aggression (scream, yell, or taunt), so that the child behaviors now numbered 31, while the 10 consequences were used unchanged.

Observers

The observers were two female young adults who were trained to use the observation schedule through the use of films plus classroom observations. An observer reliability study was done in four days of testing. The observers had to give exactly the same code number on each observation to be considered in agreement. There were a total of 120 observations for the pair of observers during the reliability study. The observers agreed 97% of the time on the child behaviors and 91% of the time on the consequences.

Observation

Six children of each sex in each of the four play groups (at different locations) were picked to study. The choice was not random, but children were chosen because they attended the sessions regularly. Each child was observed in a random order once every five minutes. The child would be watched for a 5-10 second interval, the behavior and consequence coded, and then the observer would move to the next child on the list. All 12 children were observed once every five minutes for a total of 10 hours of observation or 120 events.

Results

Child Behaviors

To test for sex differences in play activities, two-way analyses of variance (sex of child, play group) were carried out, one for each of the 24 categories of behaviors

that had a sufficient frequency of observed events. There were no significant group differences, nor sex-group interactions.

The following behaviors were preferred more by boys than girls: outside sandbox play ($F = 5.78$, df 1/40, $p < .05$); play with transportation toys ($F = 7.89$, df 1/40, $p < .05$); ride trikes, cars, etc. ($F = 9.12$, df 1/40, $p < .01$); and physical aggression, throw rocks, hit, push, shove ($F = 5.12$, df 1/40, $p < .05$). The following behaviors were more preferred by girls than boys: play with dolls ($F = 10.92$, df 1/40, $p < .01$); paint at the easel ($F = 5.64$, df 1/40, $p < .05$); play in kitchen area ($F = 7.62$, df 1/40, $p < .01$); and sing, listen to music, etc. ($F = 4.41$, df 1/40, $p < .05$).

Teachers' Reinforcement

The first question to ask if if experienced versus inexperienced teachers give differing amounts of reinforcement (teacher joins, initiates, and comments favorably) to boys and girls. A two-way analysis of variance (teacher experience, sex of child) was carried out. Boys and girls received equal amounts of teacher response, and there was no significant interaction. However, there was a significant experience effect with experienced teachers positively interacting more with children than inexperienced teachers ($F = 10.88$, df 1/12, $p < .01$). Teacher criticism was rare and there was no significant sex of child or experience of teacher effect.

However, it is more interesting to look at the differences in the ways that experienced and inexperienced teachers interacted with the children. Experienced teachers initiated behavior significantly more than inexperienced teachers ($F = 22.6$, df 1/12, $p < .01$) with no significant sex differences or interaction. Inexperienced teachers joined the children's play more often ($F = 32.16$, df 1/12, $p < .01$) and both inexperienced and experienced teachers joined boys' play more than girls' play ($F = 7.20$, df 1/12, $p < .05$), but there was no interaction. Experienced teachers commented favorably more than inexperienced teachers ($F = 12.74$, p 1/12, $p < .01$) and girls were given more favorable comments than boys ($F = 11.42$, df 1/12, $p < .01$) and there was no significant interaction.

When the eight sex-preferred behaviors were examined and patterns of teacher reinforcement to these behaviors

studied, girls are reinforced by experienced teachers 80% of the time and by inexperienced teachers 84% of the time for feminine-preferred behaviors. However, a different pattern emerges when comparing the type of reinforcement received by boys. Experienced teachers reinforce boys for feminine behaviors 79% of the time while inexperienced teachers reinforce boys only 55% of the time for feminine-preferred behaviors. This is a significant difference ($t = 3.44$, $df\ 6$, $p < .02$).

This pattern of reinforcements for inexperienced teachers is very similar to that reported for male preschool teachers by McCandless and Etaugh. The experienced and inexperienced teachers were responding differently to the preschool children. Experienced teachers initiated activities which had concrete outcomes (i.e., art work, design boards, etc.) while the inexperienced teachers joined existing play groups which were almost always composed of one sex and very often were engaged in sex-stereotyped activities. When examining the behavior of experienced teachers closely, it appears that they direct children toward more school-like behaviors, while inexperienced teachers let the children's ongoing behavior determine their own responses. It is possible that experienced teachers do not consider sex appropriateness a salient variable.

Study 2

There is evidence that women in general do not have as strong sex-stereotypes for appropriate and inappropriate behavior as men. Fagot (1973a) asked men and women with little experience with young children to rate a list of behaviors engaged in by toddlers as masculine, feminine, or neutral. Men rated behaviors as significantly more sex-typed than women, suggesting that they are more sensitive to the variable of sex appropriateness than women. Fagot (1974) had parents of toddlers rate the same list of behaviors for sex appropriateness and found again that men rated more behaviors as sex-appropriate than did women.

In an attempt to test the relative effects of sex of rater and experience with children, two rating scales using the Fagot-Patterson Observation Schedule were developed.

Method

Subjects

The subjects were all students at the University of Oregon and were solicited in several psychology and education classes. Half of the subjects were experienced in dealing with young children and half not, and half were male and half were female. All the subjects were young adults and there did not appear to be an age difference between the experienced and inexperienced groups. Experience came from working in camps, day care centers, schools, and in a few cases from their own children. Inexperienced individuals were those with no children, no practicum experience with young children, and no brothers and sisters more than ten years younger.

Procedure

The rating scales consisted of the 31 child behaviors used in the observation study. The subjects were split into two groups equally divided between experience and sex. One group of subjects was asked to rate each behavior as appropriate to boys, to girls, or equally appropriate to both sexes. A second group of subjects was asked to rate the behaviors as important for future academic performance, somewhat related to future academic performance, or not related.

Results

Behaviors were considered to show significant sex stereotyping if 25% of men or women in either the experienced or inexperienced groups rated them as appropriate to one sex, and there was no more than a total of 5% of the subjects rating them in the opposite direction. In most cases behaviors were rated either appropriate for one sex or neutral. Twelve of the 31 behaviors were rated as sex-stereotyped, six male and six female.

Normal tests for differences between proportions were carried out to determine if the proportion of experienced versus inexperienced persons who rated behaviors as stereotyped were different. On all 12 behaviors the proportion of inexperienced persons who rated the behaviors as stereotyped was greater than the number of experienced persons. Inexperienced males were then compared with inexperienced females, and differed significantly on 11 of the 12 behav-

iors (a significant proportion of both sexes rated aggressive behavior as more appropriate for males, and there were no significant differences between the sexes). Inexperienced males differed significantly from experienced males on all 12 behaviors and inexperienced and experienced females differed significantly on 10 of the 12 behaviors (they did not differ in rating play with dolls and jumping rope as extremely feminine). The results are presented in Table 1.

Insert Table 1 about here

The ratings on the importance of the behaviors for future academic success were more difficult to analyze. In particular, the inexperienced subjects did not show much agreement in their ratings and often the ratings were evenly divided between the three possible categories. Inexperienced males and females differed significantly in their ratings on two of the behaviors with males, rating hammering and sawing and playing in the kitchen as significantly more school-related than females. Experienced subjects were more likely to rate the behaviors at the extremes, either they felt a behavior was very important to future school success or not at all important. Experienced males and females showed good agreement in their ratings. The following behaviors were rated as important to future school performance by more than 50% of the experienced persons: painting at the easel, cutting, pasting, and drawing, playing with design boards, etc., building with blocks, singing, listening to records, looking at the science table, helping teacher, talking to teacher, and asking teacher for help. Two of these behaviors were significantly preferred by girls: painting at the easel and singing; while none were preferred by boys. Also, helping the teacher, talking to the teacher, and asking teacher for help were all activities more preferred by girls than by boys, although the differences did not reach significance.

Discussion

The two studies taken together suggest that the sex of the teacher may not be the determining factor in the over-representation of reinforcement of feminine-preferred behaviors. Instead, the teaching experience of the teacher may also play a part, for it appears that inexperienced

females may not differ much from inexperienced males in their classroom behavior. Inexperienced females rate fewer behaviors in a sex-stereotyped fashion than do inexperienced males, but their classroom behavior appears to be influenced by their lack of teaching experience, in that they avoid disturbing the status quo. Experienced males and females appear to be more sensitive to the academic or task-related nature of certain behaviors, and because many of these behaviors are feminine-preferred it may account for the fact that experienced female teachers pay more attention to both sexes when they are engaged in such task-related behaviors.

This does not alter the fact that girls are rewarded for behaviors which are clearly preferred by them while boys are not, at least by experienced female teachers. However, the rating of preschool behaviors in terms of their relation to academic success by experienced males and females suggests that their views on the meaning of behaviors are fairly close, and from this it might be predicted that they would behave similarly in the classroom. If so, then boys will continue to receive reinforcement only for non-preferred behaviors regardless of the sex of the teacher.

This, then, forces us to ask "Is there any relation between the fact that boys do not receive reinforcement for their preferred behaviors and their poorer performance in school? If so, then what can be done?" It doesn't look as if the simplistic notion of changing the sex of the teacher will reverse the reinforcement patterns. Perhaps a wiser approach would be to determine just why it is that school behaviors in the United States are non-preferred by boys, for this is not a universal finding even in Western cultures.

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Table 1

Proportions of Raters Rating Behavior as Sex-Appropriate

Behavior	Sex Appropriate	Inexperienced		Experienced	
		Male (N=56)	Female (N=52)	Male (N=25)	Female (N=31)
8. String beads	female	.339	.154	.080	.060
9. Build with blocks	male	.429	.250	.080	.060
10. Hammer and saw	male	.518	.327	.240	.200
11. Transportation toys	male	.500	.346	.080	.100
13. Kitchen play	female	.661	.365	.240	.100
14. Dollhouse	female	.661	.442	.400	.322
15. Dolls	female	.570	.327	.400	.322
17. Dress in opposite-sex costumes	female	.304	.154	.040	.030
22. Science table	male	.250	.019	.000	.030
26. Climb	male	.357	.077	.125	.100
29. Physical aggression	male	.482	.385	.125	.100
31. Jump rope	female	.375	.173	.240	.129

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